

THE LEISURE HOUR

A FAMILY JOURNAL OF INSTRUCTION AND RECREATION.

"BEHOLD IN THESE WHAT LEISURE HOURS DEMAND,—AMUSEMENT AND TRUE KNOWLEDGE HAND IN HAND."—Cowper.



PRACTISING NIGHT.

THE MASTER OF AYNHOE.

CHAPTER III.—THE AYNHOE SINGING BIRDS.

"But the Gregorians, Mr. Purefoy, what are they?" asked Annie, looking earnestly at her master, as she sat with her pencil and note-book in hand, that she might lose nothing.

"What are Gregorians?" he replied; "the subject is vast and exalted, where shall I begin?"

"Tell me how they differ from our modern music," said Annie.

"Child," he replied, as if trying to come down to her, "they are distinguished by being written in the ancient church modes or tones."

"Modes?" said Annie, in a voice which meant, "What do you mean by modes?"

"Dear child," he replied, playing in a subdued tone on his new violin while he spoke, "do you not know that there are two modes, the major and the minor?"

"Yes, I learnt that; but yet I feel as if I understood nothing properly till you began to teach me."

Kindly smiling, he gave her much instruction, ending with, "D was the first tonic."

"And a very good one, no doubt," said Mr. Trueman, who had grown into the freedom of a friend, and let himself in, and walked up without ceremony—"a very good tonic, but dinner is a better one in my opinion when one is hungry, and I want my little housekeeper here to come and give her orders, or three o'clock will come and dinner will not appear."

Annie looked at her watch, and blushed to see that she had overstayed her time, while Mr. Purefoy seemed troubled at her going.

"Remember, I do not advocate Gregorian chants because they are written in the ancient tonality, that is unimportant, but because they are melodies, because—"

"Annie," said Mr. Trueman, coming back after her from the landing-place, "come, my dear, you are trespassing on Mr. Purefoy's time." And he succeeded at last in carrying her off.

For a few seconds after she was gone, those lustrous eyes were filled with sadness, but soon whatever thoughts had saddened them had passed away, and the magic of his violin again asserted itself.

"But was Mr. Purefoy *always* playing the violin?"

He was very seldom known to do anything else.

"Dear me! and merely for pleasure—not as a teacher, for the purpose of earning bread for a family, but from sheer love of it! And this same Mr. Purefoy the curate calls a 'good man'!"

Ah, reader, what a puzzling world it is! Can you account for all, or half, the things you find good people do? (The wicked, of course, one never interferes with.) If you can, you are very ingenious, as well as charitable; the best that seems possible in most cases is to hope well, and obey the command, "Judge not." It may be you will say before our story ends, "Poor Mr. Purefoy!—I can quite understand his conduct, and am very glad he had a fiddle to play!"

Mrs. Wickbury, who was a sort of nursing mother as well as charwoman to Reginald, paid him a visit soon after Annie had left. She brought him his dinner, which she always provided and cooked for him, and which he ate without inquiry.

"I must do a bit to the room, sir," she said, when she had placed the meal as comfortably for him as she could, in a clearing among the miscellaneous coverings of the table.

"To the room?—*this* room?" he asked, looking at her with an air of sorrowful inquiry.

"Yes, sir, you know it's the practising to-night, and you'll have more than usual, I'm told."

"To-night," exclaimed Mr. Purefoy, "is it to-night?"

"Yes, sir, it's true, indeed, and I was thinking now Miss Trueman is to come, it would be as well if you'd let me put the chairs and a bench and that table into the next room; I can sweep it up a bit, and it will do very well," said Mrs. Wickbury.

"The next room?" said Mr. Purefoy, in dismay at such a prospect of revolutionary disturbances among his things; "why? tell me why."

"Well, sir, it would be a more proper room than this, I count; the screen hides the end where the chamber part is, I know; but any pull might bring it down, and then you would feel very awkward, don't you think?"

No; Mr. Purefoy did not think; he had no fear that any one would pull down the screen.

"Well, sir, Whitehall says the voices would sound as well again in the other room," said Mrs. Wickbury, plying in a quarter which she thought would prove successful.

"Voices—ah!" said Mr. Purefoy, "it may be so. You shall make it ready. Who are coming?"

"A strong party, sir, if all come you expect," said Mrs. Wickbury.

"I expect," said Mr. Purefoy, as if he did not expect anything at any time, and lived only in the present moment, and that far-away distance, and past future, to which his music transported him.

"Ah! you've forgot, sir, I thought you very like might," said Mrs. Wickbury; "it's the grand practising night, you know, sir, and there will be, let me see, there's my husband (to be sure he ought to have come last), and there's Miss Gravit and Miss Trueman (and belike her aunt and pa), and there's Unity Briggs and Cockerill Warren, and Jeremy Ferrit, and the schoolmaster's son (the old gentleman can't be out of nights), and one or two more, if I could think of them."

Mr. Purefoy went on eating rapidly in silence, and had finished his dinner before Mrs. Wickbury had nearly given her mind to the arrangement of the room. She proceeded by his tacit consent, removing the furniture, article by article, till he was despoiled of all, and was obliged to sit upon the side of his bed to play, with his bolster for a desk.

Mrs. Wickbury, who knew from experience how little he was to be depended on, resolved to give a look in when she saw the company assembled, and hoped he would have his tea in good time, and be ready for them. He nodded her away, only too thankful to be left in peace once more, and, occupied by reverie and music, the hours slid along.

Miss Gravit, who did not know of the new concert-room, and happened to be at liberty early, ran upstairs as usual, and found him earnestly at work, his eyes on his bolster desk. The emptiness of the room struck her, and his strange position struck her; but much more did she wonder at the bewildered stare with which he looked around him after his departed furniture. A confused remembrance of some change he had, but nothing clear enough to help him in his perplexity.

"Have you had a sale, Mr. Purefoy?" said Miss Gravit, laughing. "If so, you should have given us notice to bring our seats with us."

"Seats!" he exclaimed, looking round again.

"Yes, you know we are going to have our grand practice to-night. Surely you haven't forgotten, and your new pupil, Annie Trueman, is to come out as your *prima donna*."

While she spoke, Mr. Purefoy tried to account to himself for the disappearance of his chairs, and the mention of Annie suddenly brought back to him the whole secret; her coming had been the prime reason given by Mrs. Wickbury for the change.

"In the next room," he exclaimed, starting up, and striding towards the door. "They are all in the next room."

Thoroughly awake now, he proceeded to arrange his music, and to look over with Miss Gravit the programme for the evening's work.

"She has a voice like a bell, I am told."

"Like a seraph," he replied.

"She will be your alto, of course?" she asked, after a pause. It was not often that he gave vent to his inmost feelings thus.

Before Mr. Purefoy could reply, Annie arrived with Mr. Trueman, who was very glad to find Miss Gravit on the ground, as he saw the prospect of early emancipation for himself, Annie being quite secure under her highly-correct ægis. Mr. Purefoy's eyes lighted with singular pleasure when he saw her, but he continued his arrangements without any particular address. True to her resolve, Mrs. Wickbury peeped in and asked with a curtesy if anything was wanted. She had borrowed a thing or two from the school in the shape of form and desk, and altogether the room had an imposing appearance when the company had assembled. Unity Briggs, the butcher, Cockerill Warren, the baker, Jeremy Ferrit, the general shop-keeper, and all the singing birds of Aynhoe came in one after another, and looked full of music and importance. Some had brought instruments, others had nothing but a voice to lend to the general harmony.

Mr. Purefoy took his place as conductor, and all arranged themselves according to their posts.

Annie, who was by no means intimate with any of the Aynhoe people, and had never made one at their vocal parties before, was rather timid, and it was not like a bell, certainly, whatever a seraph's voice may resemble, that she sang at first. But a little observation reassured her. Mr. Purefoy's mind was in the general effect, and when the glance of his eye betrayed pleasure, it was not with any one, but with all together; when his mouth worked itself into a curve of distress, it was not directed against the solitary offender that made the discord, but against the broken harmony itself.

As for the performers, they were so much occupied with themselves, she saw she had no very stringent criticism to fear.

"Sing out," said Miss Gravit, kindly.

And she did sing out.

"That's what I call something very partickler," said Unity Briggs, when they had finished a quartette in which he was tenor. "Don't you think, sir," he continued, addressing Mr. Purefoy, "as if so be we was to have that for the start, it would be very striking?"

"For the start, Mr. Briggs!" said Cockerill Warren, "it would never be in place to start with that, we've got the overture to start with; but, of course, it shall be as Mr. Purfy likes."

Certainly an overture was a proper thing to start with, but propriety was not the chief motive with Cockerill Warren; he played the flute, and the flute had a long *all-but-solo* in the overture—a solo in which he was supported by Mr. Purefoy's violin; and, therefore, he liked much that the overture should make the start.

Whitehall Wickbury and Jeremy Ferrit took different sides in the under-current debate that followed, when Annie, who had regained her confidence, readily assented to Mr. Purefoy's proposal, that she should take the treble in an anthem that was next to be sung. Miss Gravit looked surprised. She had always been treble, she supposed that Annie would have been content with alto.

Mr. Purefoy heard nothing of the debate between his tenor and bass, nor did he see Miss Gravit's surprise; but placing the music on the desk, he looked the company into their places and prepared to play. Annie's voice came out now with its full power, and Miss Gravit quite forgave her being treble, while Mr. Purefoy evidently revelled in the rich, sweet, and

powerful notes. Mr. Trueman, who had got very tired, was refreshed by the anthem in which his daughter sustained so telling a part, and whispered to Cockerill when it was over, "That's a fine thing—a very fine thing."

Cockerill, who, with his meek and submissive manner, had his full quota of conceit, and obstinate adherence to his own opinion, was, withal, very open to flattery, and construed every possible approach to a compliment into one; therefore he replied to Mr. Trueman with a simpering deferential bow, that he thought it *was* a fine thing, but very fatiguing to sing, as it wanted so much power and execution in the bass.

Unity Briggs overhearing him, laughed and said, "For once, Cocky, we could have got on without much bass, for our new treble took the shine out of us all—what a power she's got, sir! I could hardly do my part for listening to her."

Mr. Trueman was pleased, Unity's hearty tribute was a compensation to him for the weary hour and a half he had passed; but as he found that the overture was the next thing to come off (to the mortification of Cockerill, who had mentioned that "he didn't like tiring himself so much before, as he had a deal to do in the overture with his flute, and wanted his breath"), he retired silently from the room, looking as musical as he could, and humming on, thinking he hummed the air, till he was out in the street. Then he resolved to call on old William Ridley, whose son had been expected at the concert but had not appeared.

CHAPTER IV.—THE REAL "MASTER."

GENERALLY the old schoolmaster was to be found in his comfortable sitting-room, so clean and bright, with his Bible before him, or some pithy book of divinity. His son supported him, and he had a quiet evening of life, which all agreed he had well earned, though he as heartily ascribed it to the unmerited goodness of God. A good master he had been to the children whom he had trained; many of them now declared that they owed their well-doing in this life, and their hopes for the next, to his sound teaching. He took the Bible for his rule, and fitted all he taught by its square.

"Don't you think the lads give a deal of time to learning the Bible?" one objector would say, for he had objectors as well as most people.

"I wish they could give double," he would answer; "it is the fountain of wisdom for good living, happy dying, and a blessed rising again."

His son, an excellent young man, followed in his steps and promised to be as great a blessing to the rising generation of Aynhoe as his father had been to the past. Old William's hair was white as silver; his eye was as bright and vigorous, except when dimmed by an attack of rheumatism, as it had ever been; his cheek was ruddy, and his air and gait firm. There was somewhat of the schoolmaster severity about him, an impatience of contradiction, a "laying-down of the law," as the Aynhoe people said, as if nobody else had the same right to do it; but that was perfectly natural, and as it went no deeper than the surface, never gave more than slight offence.

When Mr. Trueman pushed open the heavy door and passed through the passage that led to the master's dwelling-house, he felt, as he always did at such times, how much of his present comfort he owed to his old friend, and his heart, already warm with

the tribute of Unity Briggs to his dear Annie, was never more gratefully disposed to him than now. He opened the sitting-room door after one or two fruitless knocks, and, looking in, found it deserted; there was the table in front of the fire with the open Bible on it, and the old man's spectacles beside, but the room was untenanted, and there was no light save the flickering of the fire. He was sorry, for he liked a chat with old William, and he felt so sociably disposed just then; but, supposing he was with some neighbours, he was about to leave, when he met, coming from the school-room, the old man, his son, and a stranger who looked town-like, and walked with a brisk, authoritative air.

"Ah, sir! Mr. Trueman!" exclaimed old William, "I'm glad to see you, you couldn't have come at a better time; walk on if you please, and listen to this strange story."

"Strange story?" said Mr. Trueman, as he turned towards the sitting-room again.

"Well, sir, I call it a strange story," said the old man, in some heat, "but you shall hear and judge for yourself."

Mr. Trueman took a seat, and the old man (whose back, generally a little bent, became quite straight) said:—

"This evening, sir, we have been given to understand, that as I am no longer able to fulfil my duties, my place is to be taken from me, and I am to turn out and make room for another."

"Turn out!" said Mr. Trueman; "why, your son does your duties, what's the difference?"

"Mr. Ridley has put the case a little harshly," said the stranger; "I am the agent for Sir Lucas Flood, you are aware that he is the landed proprietor in this place."

"A landed proprietor," said Mr. Trueman, who had no love for the name of Sir Lucas from old associations.

"Well, it's '*great A*' at least," said the stranger, attempting a joke; "he is *the* man of property here, and of course is *the* influential person."

"What about him?" asked Mr. Trueman, rather shortly, for the agent's manner did not make his subject more savoury.

"It is his intention, as Mr. Ridley has virtually resigned his post, to put a new master of his own selection into this school, that's all," said the stranger.

"But there *is* a master," said Mr. Trueman.

The stranger smiled satirically, and shook his head, saying—"Not of Sir Lucas's appointment."

"What right has Sir Lucas to appoint, or to interfere with the school at all?" demanded Mr. Trueman; "it was built and endowed by the Purefoy family, we all know that."

"I don't think, since what I have told Mr. Ridley has been taken in such very ill part, that I am called on to give any explanation," said the agent, loftily; "but, as mortifications sour the spirit, I will make some allowance. You are aware, I dare say, that the chief part of the Purefoy property—all of it, I believe, except the old tumble-down house—passed into the hands of old Sir Lucas's father, and although he did not build the school, yet the ground it stands on is his. It was always disputed in the time of Mr. Michael Purefoy, and is now proved to belong to Sir Lucas, and if he is resisted, he will enforce a ground-rent that will swamp the endowment."

"But why should he interfere, even if he has the power?" asked Mr. Trueman.

"He chooses to do so; his views for the good of Aynhoe may not coincide with yours, but he means nevertheless to carry them out, and institute a new order of things."

Not to weary the reader, the agent, Mr. Soper, stated that Sir Lucas had a master of his own, ready to be installed, and he expected the inhabitants of Aynhoe to receive him with respectful deference to his choice.

"There is not a man in Aynhoe that will *hear* of it, that is my firm impression," said Mr. Trueman.

"It is possible, sir, that your independent position may mislead you on the point, but we are not disposed to ask an opinion; Sir Lucas will understand the feeling of the inhabitants from their own answer to him. I purpose calling a meeting, that his kind proposal for their good may be laid before them, and I hope they will know their own interest better than to show themselves ungrateful. The change *will* be made whether they approve of it or not."

"And what does he promise by way of recompense to Mr. Ridley here, who has spent his life in the service of the place?" asked Mr. Trueman.

"Pray say nothing about that, Mr. Trueman!" exclaimed the old man, firmly.

"I have no instructions on that point," said Mr. Soper; "you know in all reforms there are sure to be some sufferers, but I dare say, as Mr. Ridley has had such a snug berth for so many years, he has saved a pretty independence."

"Sir, Mr. Trueman, be so good as not to speak about *us*, nor about any of it, to this young man; it is his master that must be spoken to; he has only delivered a message, and, may be, has made some mistake in it," said Daniel Ridley, perceiving that Mr. Trueman was about to reply, and that his father was growing impatient under the agent's insolent importance.

"Very good, young man," replied Mr. Soper; "depend upon it I shall not fail to report the impertinent manner in which you have received the message of your master—and the Master of Aynhoe, remember."

With this threatening rejoinder Mr. Soper retired, having, in addition to personal interest, a personal affront to stimulate him in the scheme on which he was embarked.

"Don't give yourself a moment's uneasiness, my good friend," said Mr. Trueman, when he was alone with the old man and his son after they had calmed down a little; "tell me all about it, and be sure it will come to nothing; all Aynhoe will be on our side, and we will pay his ground-rent, whatever it is."

The old man then described Mr. Soper's behaviour. He had requested Daniel to show him into the school-room, had asked to see the lesson lists for the different days, had inquired whether they had lectures on *this* and *that*, whether they could pass an examination in *this* and *that* book, etc., etc. The more he investigated, the less satisfied he seemed—shook his head, declared that Aynhoe was sadly behind other places, that it was time to do something for it, that it was quite as it had been represented to Sir Lucas, and the sooner a reformation was begun the better.

Mr. Trueman did his best to dispel any doubts or fears in father or son, but William said,—

"I don't know, sir, how it will be; you see, Sir Lucas is a great man, and if he should insist on it, I don't think the people will go against him."

"I hope better of the Aynhoe people for gratitude and right feeling than you do," said Mr. Trueman. "Have they not all to thank you, as I do, for their first success in life?"

The old man smiled kindly, but shook his head.

"And as to Sir Lucas being master of Aynhoe," continued Mr. Trueman, "that's nonsense; he is chief owner, we'll say; but Mr. Purefoy's interest is something, and we have, let me see,—"*and he went on counting up various influential personages before and behind the old church, and finished up with the butcher and baker and general shopkeeper, in whom he had implicit faith.*

"Master of Aynhoe?" said the old man. "*That was the best thing that young man said. Sir Lucas master of Aynhoe? No, sir, he is not, while the Lord reigneth; and the words, as he spoke them, came into my mind like a strong cordial, for they reminded me of the truth that the Lord is Master of Aynhoe, and if we put the question before Him, then the right thing will be done, and whatever it is we must submit.*"

Mr. Trueman revered the faith of his old master; but he was positive that it would be a great misfortune to Aynhoe to lose the Riddleys, and that there would be so strong an expression of this feeling that Sir Lucas would be compelled to change his intentions. It was near supper time when he got home, and Annie had not returned. Being much troubled, he wanted her to talk to, also he had grown hungry in the excitement of the evening, so he hastened to the concert-room in search of her.

"Dear me, at it still!" he exclaimed, as he bustled up the stairs. "The worst of these geniuses is, they have no common sense; they can never have enough of their hobby."

He entered the room, and elbowing his way with some impatience, tried to reach Annie; but she was close to Mr. Purefoy, turning over for him, and had no eyes for anything but her business; they were executing a grand concerted piece which took in their full force; it was intended to conclude the concert with it.

"Beg your pardon, Mr. Briggs; excuse me, Mr. Warren; sorry to trouble you, Mr. Wickbury; if you'd just let me pass, Mr. Ferrit," he said, with a nudge here and there, till he got up to Miss Gravit, who was tying on her cloak.

"How tired you must be!" he exclaimed. "I'm sure Annie will be quite worn out. I really can't leave her any longer."

"She looks very happy," said Miss Gravit, "and will want a strong pull to get her away."

"Pray how long is this to last?" asked Mr. Trueman, desperately.

"Not above ten minutes more; I'm very glad you have come, for I've been rather in a fidget about my aunt. So if you will kindly let me pass, I will leave your daughter to your care."

"Oh, don't go! Will they begin another?" said Mr. Trueman.

"Not unless Mr. Purefoy tempts them; if you want Annie, I would recommend you to make a desperate push when this ends."

"Not before?" he asked.

"No, that's impossible; but it's very fine. Stop and listen to it," she answered, with a mischievous little laugh, as she left the room.

"Very fine for you who can get off," he grumbled, plaintively; and then set himself like a cat watching

a bird, that he might spring on Annie the moment the last chord had sounded.

"Oh, isn't it grand?" she exclaimed, when he seized her arm and drew her a step or two away; "I'm so glad you have heard it, but you only heard a part. I'm sure Mr. Purefoy would—"

"Come home, child, I've got something to tell you, and it's very late," he replied, in a tone that Annie knew promised ill for more music, so she prepared to cloak herself in readiness to depart.

"You'll excuse my not asking for an encore, Mr. Purefoy," he said, mollified, now that he saw a way to escape; "but I have had some unpleasant intelligence since I was here before, and I wish to speak to my little girl about it. It concerns us all, my friends," he continued; "I have been told this evening that Sir Lucas Flood means to upset our school, and put in a master of his own choice, but I told the young man that brought the story, that I could answer for Aynhoe, there was not a voice that would be for him."

A murmur of disapproval ran through the room. As the performers were putting up their instruments, they generally declaimed in no measured terms on the tyranny and assumption of Sir Lucas, because he happened to be a rich man, in trying to coerce them in a matter so entirely their own concern; and many and vehement were the protests of standing by old Master Ridley.

While all this went on, Mr. Purefoy's eyes were fixed on his desk; and he continued playing in the softest tones, absorbed, as it seemed, in the music. He hardly returned the "good-night" of Mr. Trueman and Annie.

"I believe that man will sit there till to-morrow morning," said the former, as they descended the stairs.

"I really don't think he knew you were saying 'good-night,'" said Annie, "we left him so abruptly."

"Who was to run the risk of waking him up?" he replied. "I know what would have happened then; I'll tell you what, Annie, I'm glad this is the last practice, and, when the concert is over, I shall think twice before I let you engage for another, my dear, I shall indeed. You know a man that lives on a fiddle, and never eats, or drinks, or sleeps, except by accident, as you may say, isn't likely to consider the natural wants of other people."

SKETCHES OF THE GEOLOGICAL PERIODS AS THEY APPEAR IN 1871.

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VIII.—THE CARBONIFEROUS AGE.

THAT age of the world's history which, from its richness in accumulations of vegetable matter destined to be converted into coal, has been named the Carboniferous, is in relation to living beings the most complete and noble of the Palæozoic periods. In it those varied arrangements of land and water which had been increasing in perfection in the previous periods, attained to their highest development. In it the forms of animal and plant life that had been becoming more numerous and varied from the Eozoic onward, culminated. The Permian which succeeded was but the decadence of the Carboniferous, pre-

paratory to the introduction of a new order of things. Thus the Carboniferous was to the previous periods what the Modern is to the preceding Tertiary and Mesozoic ages—the summation and completion of them all, and the embodiment of their highest excellence. If the world's history had closed with the Carboniferous, a naturalist, knowing nothing further, would have been obliged to admit that it had already fulfilled all the promise of its earlier years. It is important to remember this; since we shall find ourselves entering on an entirely new scene in the Mesozoic period; and since this character of the Carboniferous, as well as its varied conditions and products, may excuse us for dwelling on it a little longer than on the others. On the other hand, the immense economic importance of the coal formation, and the interesting points connected with it, have made the Carboniferous more familiar to general readers than most other geological periods, so that we may select points less common and well-known for illustration. Popular expositions of geology are, however, generally so one-sided and so distorted by the prevalent straining after effect, that the true aspect of this age is perhaps not much better known than that of others less frequently described.

Let us first consider the Carboniferous geography of the northern hemisphere; and in doing so we may begin with a fact concerning the preceding age. One of the most remarkable features of the Newer Devonian is the immense quantity of red rocks, particularly red sandstones, contained in it. Red sandstones, it is true, occur in older formations, but comparatively rarely; their great head-quarters both in Europe and America, in so far as the Palæozoic is concerned, are in the Upper Devonian. Now red sandstone is an infallible mark of rapid deposition, and therefore of active physical change. If we examine the grains of sand in a red sandstone, we shall find that they are stained or coated, externally, with the peroxide of iron, or iron rust; and that this coating, with perhaps a portion of the same substance in the intervening cement, is the cause of the colour. In finer sandstones and red clays the same condition exists, though less distinctly perceptible. Consequently, if red sands and clays are long abraded or scoured in water, or are subjected to any chemical agent capable of dissolving the iron, they cease to be red and resume their natural grey or white colour. Now in nature, in addition to mechanical abrasion, there is a chemical cause most potent in bleaching red rocks, namely, the presence of vegetable or animal matter in a state of decay. Without entering into chemical details, we may content ourselves with the fact that organic matter decaying in contact with peroxide of iron tends to take oxygen from it, and then to dissolve it in the state of protoxide, while the oxygen set free aids the decay. Carrying this fact with us, we may next affirm that iron is so plentiful in the crust of the earth that nearly all sands and clays when first produced from the weathering of rocks are stained with it, and that when this weathering takes place in the air, the iron is always in the state of peroxide. More especially does this apply to the greater number of igneous or volcanic rocks, which nearly always weather brown or red. Now premising that the original condition of sediment is that of being reddened with iron, and that it may lose this by abrasion, or by the action of organic matter, it follows that when sand has been produced

by decay of rocks in the air, and when it is rapidly washed into the sea and deposited there, red beds will result. For instance, in the Bay of Fundy, whose rapid tides cut away the red rocks of its shores and deposit their materials quickly, red mud and sand constitute the modern deposit. On the other hand, when the red sand and mud are long washed about, their red matter may disappear; and when the deposition is slow and accompanied with the presence of organic matter, the red colour is not only removed, but is replaced by the dark tints due to carbon. Thus, in the Gulf of St. Lawrence, where red rocks similar to those of the Bay of Fundy are being more slowly wasted, and deposited in the presence of seaweeds and other vegetable substances, the resulting sands and clays are white and grey or blackened in colour. An intermediate condition is sometimes observed in which red beds are stained with grey spots and lines, where sea-weeds or land-plants have rested on them. I have specimens of Devonian red shale with the forms of fern leaves, the substance of which has entirely perished, traced most delicately upon them in greenish marks.

It follows from these facts that extensive and thick deposits of red beds evidence sub-aerial decay of rocks, followed by comparatively rapid deposition in water, and that such red rocks will usually contain few fossils, not only because of their rapid deposition, but because the few organic fragments deposited with them will probably have been destroyed by the chemical action of the superabundant oxide of iron, which, so to speak, "iron-moulds" them, just as stains of iron eat holes out of linen. Now when Sir Roderick Murchison tells us of 10,000 feet in thickness of red iron-stained rocks in the old red sandstone of England, we can see in this the evidence of rapid aqueous deposition, going on for a very long time, and baring vast areas of former land surface. Consequently we have proof of changes of level and immense and rapid denudation—a conclusion further confirmed by the apparent unconformity of different members of the series to each other in some parts of the British Islands, the lower beds having been tilted up before the newer were deposited. Such was the state of affairs very generally at the close of the Devonian, and it appears to have been accompanied with some degree of subsidence of the land, succeeded by re-elevation at the beginning of the Carboniferous, when many and perhaps large islands and chains of islands were raised out of the sea, along whose margins there were extensive volcanic eruptions, evidenced by the dykes of trap traversing the Devonian, and the beds of old lava interstratified in the lower part of the Carboniferous, where also the occurrence of thick beds of conglomerate or pebble-rock evidences the tempestuous action of the sea.

But a careful study of the Lower Carboniferous beds, where their margins rest upon the islands of older rocks, shows great varieties in these old shores. In some places there were shingly beaches, in others extensive sand-banks, in others swampy flats clothed with vegetation, and sometimes bearing peaty beds, still preserved as small seams of coal. The bays and creeks swarmed with fishes. A few sluggish reptiles crept along the muddy or sandy shores, and out seaward were great banks and reefs of coral and shells in the clear blue sea. The whole aspect of nature, taken in a general view, in the Older Carboniferous period, must have much resembled that at present

seen among the islands of the southern hemisphere. And the plants and animals, though different, were more like those of the modern South Pacific than any others now living.

As the age wore on, the continents were slowly lifted out of the water, and the great continental plateaus were changed from coral seas into swampy flats or low uplands, studded in many places with shallow lakes, and penetrated with numerous creeks and sluggish streams. In the Eastern Continent these land surfaces prevailed extensively, more especially in the west; and in America they spread both eastward and westward from the Appalachian ridge, until only a long north and south Mediterranean, running parallel to the Rocky Mountains, remained of the former wide internal ocean. On this new and low land, comparable with the "Sylvas" of the South American continent, flourished the wondrous vegetation of the Coal period, and were introduced the new land animals, whose presence distinguishes the close of the Palæozoic.

After a vast lapse of time, in which only slow and gradual subsidence occurred, a more rapid settlement of the continental areas brought the greater part of the once fertile plains of the coal formation again under the waters; and shifting sand-banks and muddy tides engulfed and buried the remains of the old forests, and heaped on them a mass of sediment which, like the weights of a botanical press, flattened and compressed the vegetable *débris* preserved in the leaves of the coal-formation strata. Then came on that strange and terrible Permian period, which, like the more modern boulder-formation, marked the death of one age and the birth of another.

The succession just sketched is the normal one; but the terms in which it has been described show that it cannot be universal. There are many places in which the whole thickness of the Carboniferous is filled with fossils of the land, and of estuaries and creeks. There are places, on the other hand, where the deep sea appears to have continued during the whole period. In America this is seen on the grandest scale in the absence of the marine members along the western slopes of the Appalachians, and the almost exclusive prevalence of marine beds in the far west, where the great Carboniferous Mediterranean of America spread itself, and continued uninterruptedly into the succeeding Permian period.

In our survey of the Carboniferous age, though there are peculiarities in the life of its older, middle, and newer divisions, we may take the great coal measures of the middle portion as the type of the land life of the period, and the great limestones of the lower portion as that of the marine life; and as the former is in this period by far the most important, we may begin with it.

In the present condition of our civilisation, coal is the most important product which the bowels of the earth afford to man. And though there are productive beds of coal in most of the later geological formations, down to the peats of the modern period, which are only unconsolidated coals, yet the coal of the Carboniferous age is the earliest valuable coal in point of time, and by far the most important in point of quantity. Mineral coal may be defined to be vegetable matter which has been buried in the strata of the earth's crust, and there subjected to certain chemical and mechanical changes. The proof of its vegetable origin will grow upon us as we proceed. The chemical changes which it has under-

gone are not very material. Wood or bark, taken as an example of ordinary vegetable matter, consists of carbon or charcoal, with the gases hydrogen and oxygen. Coal has merely parted with a portion of these ingredients in the course of a slow and imperfect putrefaction, so that it comes to have much less oxygen and considerably less hydrogen than wood, and it has been blackened by the disengagement of a quantity of free carbon. The more bituminous flaming coals have a larger amount of residual hydrogen. In the anthracite coals the process of carbonisation has proceeded further, and little remains but charcoal in a dense and compact form. In cannel coals, and in certain bituminous shales, on the contrary, the process seems to have taken place entirely under water, by which putrefaction has been modified, so that a larger proportion than usual of hydrogen has been retained. The mechanical change which the coal has experienced consists in the flattening and hardening effect of the immense pressure of thousands of feet of superincumbent rock, which has crushed together the cell-walls of the vegetable matter, and reduced what was originally a pulpy mass of cellular tissue to the condition of a hard laminated rock. To understand this, perhaps the simplest way is to compare under the microscope a transverse section of recent pine wood with a similar section of a pine trunk compressed into brown coal or jet. In the one the tissue appears as a series of meshes with thin woody walls and comparatively wide cavities for the transmission of the sap. In the other the walls of the cells have been forced into direct contact, and in some cases have altogether lost their separate forms, and have been consolidated into a perfectly compact structureless mass.

With regard to its mode of occurrence, coal is found in beds ranging in vertical thickness from less than an inch to more than thirty feet, and of wide horizontal extent. Many such beds usually occur in the thickness of the coal formation, or "coal measures," as the miners call them, separated from each other by beds of sandstone and compressed clay or shale. Very often the coal occurs in beds of several, somewhat close to each other and separated from other groups by "barren measures" of considerable thickness. In examining a bed of coal, where it is exposed in a cutting or shore cliff, we nearly always find that the bed below it, or the "underclay," as it is termed by miners, is a sort of fossil soil, filled with roots and rootlets. On this rests the coal, which, when we examine it closely, is found to consist of successive thin layers of hard coal of different qualities as to lustre and purity, and with intervening laminae of a dusty fibrous substance, like charcoal, called "mother coal" by miners, and sometimes mineral charcoal. Thin partings of dark shale also occur, and these usually present marks and impressions of the stems and leaves of plants. Above the coal is its "roof" of hardened clay or sandstone, and this generally holds great quantities of remains of plants, and sometimes large stumps of trees with their bark converted into coal, and the hollow once occupied with wood filled with sandstone, while their roots spread over the surface of the coal. Such fossil forests of erect stumps are also found at various levels in the coal measures, resting directly on underclays without any coals. A bed of coal would thus appear to be a fossil bog or swamp.

This much being premised about the general

nature of the sooty blocks which fill our coal-scuttles, we may now transport ourselves into the forests and bogs of the coal formation, and make acquaintance with this old vegetation, while it still waved its foliage in the breeze and drank in the sunshine and showers. We are in the midst of one of those great low plains formed by the elevation of the former sea bed. The sun pours down its fervent rays upon us, and the atmosphere, being loaded with vapour, and probably more rich in carbonic acid than that of the present world, the heat is as it were accumulated and kept near the surface, producing a close and stifling atmosphere like that of a tropical swamp. This damp and oppressive air is, however, most favourable to the growth of the strange and grotesque trees which tower over our heads; and to the millions of delicate ferns and club-mosses, not unlike those of our modern woods, which carpet the ground. Around us for hundreds of miles spreads a dense and monotonous forest, with here and there open spaces occupied by ponds and sluggish streams, whose edges are bordered with immense savannahs of reed-like plants, springing from the wet and boggy soil. Everything bespeaks a rank exuberance of vegetable growth; and if we were to dig downward into the soil, we should find a thick bed of vegetable mould evidencing the prevalence of such conditions for ages. But the time will come when this immense flat will meet with the fate which in modern times befell a large district at the mouth of the Indus. Quietly, or with earthquake throes, it will sink under the waters; fishes and mollusks will swarm where trees grew, beds of sand and mud will be deposited by the water, enclosing and preserving the remains of the vegetation, and in some places surrounding and imbedding the still erect trunks of trees. Many feet of such deposits may be formed, and our forest surface, with its rich bed of vegetable mould, has been covered up and is in process of transformation into coal; while in course of time the shallow waters being filled up with deposit, or a slight re-elevation occurring, a new forest exactly like the last will flourish on the same spot. Such changes would be far beyond the compass of the life even of a Methuselah; but had we lived in the Coal period, we might have seen all stages of these processes contemporaneously in different parts of either of the great continents.

But let us consider the actual forms of vegetation presented to us in the Coal period, as we can restore them from the fragments preserved to us in the beds of sandstone and shale, and as we would have seen them in our imaginary excursion through the Carboniferous forests. To do this we must first glance slightly at the great subdivisions of modern plants, which we may arrange in such a way as to give an easy means for comparison of the aspects of the vegetable kingdom in ancient and modern times. In doing this I shall avail myself of an extract from a previous publication of my own on this subject.

"The modern flora of the earth admits of a grand twofold division into the *Phænogamous*, or flowering and seed-bearing plants, and the *Cryptogamous*, or flowerless and spore-bearing plants. In the former series, we have, first, those higher plants which start in life with two seed-leaves, and have stems with distinct bark, wood, and pith—the *Exogens*; secondly, those simpler plants which begin life with one seed-leaf only, and have no distinction of bark, wood, and pith, in the stem—the *Endogens*; and, thirdly, a peculiar group starting with two or

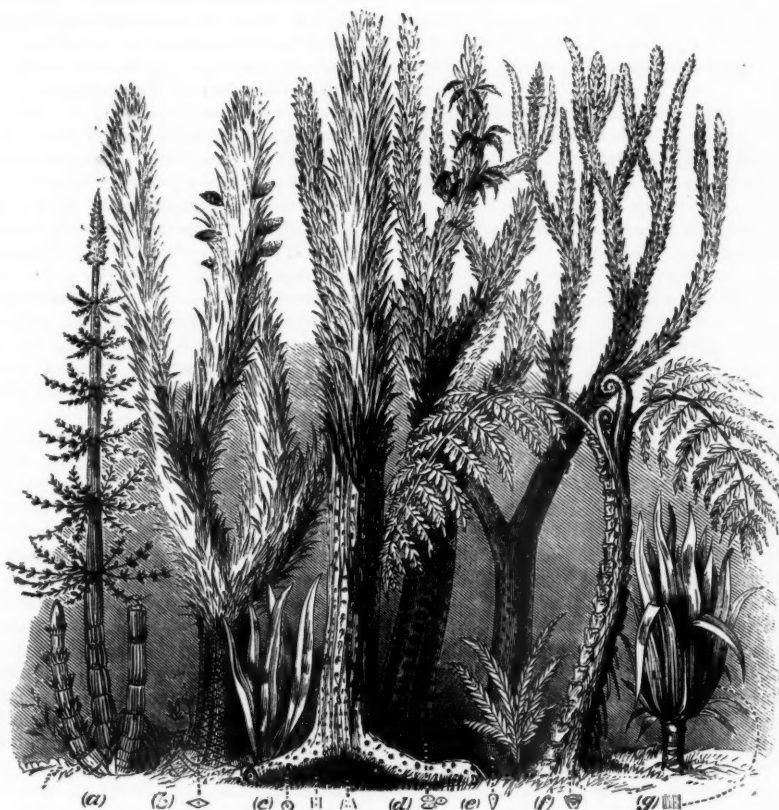
several seed-leaves, and having a stem with bark, wood, and pith, but with very imperfect flowers, and wood of much simpler structure than either of the others—the *Gymnosperms*. To the first of these groups or classes belong most of the ordinary trees of temperate climates. To the second belong the palms and other trees found in tropical climates. To the third belong the pines and cycads. In the second or *Cryptogamous* series we have also three classes,—(1.) The *Acrogens*, or ferns and club-mosses, with stems having true vessels marked on the sides with cross bars—the *Scalariform* vessels. (2.) The *Anophytes*, or mosses and their allies, with stems and leaves, but no vessels. (3.) The *Thallophytes*, or lichens, fungi, sea-weeds, etc., without true stems and leaves.

"In the existing climates of the earth we find these classes of plants variously distributed as to relative numbers. In some, pines predominate. In others, palms and tree-ferns form a considerable part of the forest vegetation. In others, the ordinary exogenous trees predominate, almost to the exclusion of others. In some Arctic and Alpine regions, mosses and lichens prevail. In the Coal period we have found none of the higher *Exogens*, though one species is known in the Devonian, and only a few obscure indications of the presence of *Endogens*; but *Gymnosperms* abound, and are highly characteristic. On the other hand, we have no mosses or lichens, and very few algæ, but a great number of ferns and *Lycopodiaceæ* or club-mosses. Thus the coal formation period is botanically a meeting-place of the lower *Phænogams* and the higher *Cryptogams*, and presents many forms which, when imperfectly known, have puzzled botanists in regard to their position in one or other series. In the present world, the flora most akin to that of the Coal period is that of moist and warm islands in the southern hemisphere. It is not properly a tropical flora, nor is it the flora of a cold region, but rather indicative of a moist and equable climate. In accordance with this is the fact that the equable but not warm climate of the southern hemisphere at present (which is owing principally to its small extent of land) enables subtropical plants to extend into high latitudes. In the Coal period this uniformity was evidently still more marked, since we find similar plants extending from regions within the Arctic circle to others near to the tropics. Still we must bear in mind that we may often be mistaken in reasoning as to the temperature required by extinct species of plants differing from those now in existence. Further, we must not assume that the climatal conditions of the northern hemisphere were in the Coal period at all similar to those which now prevail. As Sir Charles Lyell has argued, a less amount of land in the higher latitudes would greatly modify climates, and there is every reason to believe that in the Coal period there was less land than now. It has been shown by Tyndall that a very small additional amount of carbonic acid in the atmosphere would, by obstructing the radiation of heat from the earth, produce almost the effect of a glass roof or conservatory, extending over the whole world. There is much in the structure of the leaves of the coal plants, as well as in the vast amount of carbon which they accumulated in the form of coal, and the characteristics of the animal life of the period, to indicate, on independent grounds, that the Carboniferous atmosphere differed from that of the present world in this way, or in the presence of more

carbonic acid—a substance now existing in the very minute proportion of one thousandth of the whole by weight, a quantity adapted to the present requirements of vegetable and animal life, but probably not to those of the Coal period.”

Returning from this digression to the forests of

rent from that of our ordinary forest trees. If we cut into its stem, we are still further astonished at its singular structure. Externally it has a firm and hard rind. Within this is a great thickness of soft cellular inner bark, traversed by large bundles of tough fibres. In the centre is a core or axis of woody



GROUP OF CARBONIFEROUS PLANTS, RESTORED FROM ACTUAL SPECIMENS.

(a) CALAMITES (type of *C. Suckorü*). (b) LEPIDODENDRON FLOIOS, or ULODENDRON. (c) SIGILLARIA (type of *S. reniformis*). (type of *S. elegans*). (d) LEPIDODENDRON (type of *L. Corrugatum*). (f) MEGAPHYTON (type of *M. magnificum*). (g) CORDAITES, or (d) SIGILLARIA PYNCHOPHYLLUM (type of *C. borassifolia*).

the Coal period, we may first notice that which is the most conspicuous and abundant tree in the swampy levels—the Sigillaria or seal-tree, so called from the stamp-like marks left by the fall of its leaves—a plant which has caused much discussion as to its affinities. Some regard it as a gymnosperm, others as a cryptogam. Most probably we have under this name trees allied in part to both groups, and which, when better known, may bridge over the interval between them. These trees present tall pillar-like trunks, often ribbed vertically with raised bands, and marked with rows of scars left by the fallen leaves. They are sometimes branchless, or divide at top into a few thick limbs, covered with long rigid grass-like foliage. On their branches they bear long slender spikes of fruit, and we may conjecture that quantities of nut-like seeds scattered over the ground around their trunks are their produce. If we approach one of these trees closely, more especially a young specimen not yet furrowed by age, we are amazed to observe the accurate regularity and curious forms of the leaf-scars, and the regular ribbing, so very diffe-

matter very slender in proportion to the thickness of the trunk, and still further reduced in strength by a large cellular pith. Thus a great stem four or five feet in diameter is little else than a mass of cellular tissue, altogether unfit to form a mast or beam, but excellently adapted, when flattened and carbonised, to blaze upon our winter hearth as a flake of coal. The roots of these trees were perhaps more singular than their stems; spreading widely in the soft soil by regular bifurcation, they ran out in long snake-like cords, studded all over with thick cylindrical rootlets, which spread from them in every direction. They resembled in form, and probably in function, those cable-like root-stocks of the pond-lilies which run through the slime of lakes, but the structure of the rootlets was precisely that of those of some modern Cycads. It was long before these singular roots were known to belong to a tree. They were supposed to be the branches of some creeping aquatic plant, and botanists objected to the idea of their being roots; but at length their connection with Sigillaria was observed simultaneously by Mr.

Binney, in Lancashire, and by Mr. Richard Brown, in Cape Breton, and it has been confirmed by many subsequently observed facts. This connection, when once established, further explained the reason of the almost universal occurrence of *Stigmaria*, as these roots were called, under the coal beds; while trunks of the same plants were the most abundant fossils of their partings and roofs. The growth of successive generations of *Sigillaria* was, in fact, found to be the principal cause of the accumulation of a bed of coal. Two species of these trees form the central figures in our illustration.

Along with the trees last mentioned, we observe others of a more graceful and branching form, the successors of those *Lepidodendra* already noticed in the Devonian, and which still abound in the Carboniferous, and attain to larger dimensions than their older relations, though they are certainly more abundant and characteristic in the lower portions of the carboniferous. Relatives, as already stated, of our modern club-mosses, now represented only by comparatively insignificant species, they constitute the culmination of that type; which thus had attained its acme very long ago, though it still continues to exist under paupered forms. In the coal period there were several generic forms of these plants, all attaining to the dimensions of trees. Like the *Sigillaria* they contributed to the materials of the coal; and one mode of this has recently attracted some attention. It is the accumulation of their spores and spore-cases already referred to in speaking of the Devonian, and which was in the Carboniferous so considerable as to constitute an important feature locally in some beds of coal. A similar modern accumulation of spore-cases of tree-ferns occurs in Tasmania; but both in the Modern and the Carboniferous, such beds are exceptional; though wherever spore-cases exist as a considerable constituent of coal, from their composition they give to it a highly bituminous character, an effect, however, which is equally produced by the hard scales supporting the spores, and by the outer epidermal tissues of plants when these predominate in the coal, more especially by the thick corky outer bark of *Sigillaria*.

In the wide, open forest glades, tree-ferns almost precisely similar to those of the modern tropics reared their leafy crowns. But among them was one peculiar type, in which the fronds were borne in pairs on opposite sides of the stem, leaving when they fell two rows of large horseshoe-shaped scars marking the sides of their trunks. Botanists, who have been puzzled with these plants almost as much as with the *Stigmaria*, have supposed these scars to be marks of branches, of cones, and even of aerial roots; but specimens in my collection prove conclusively that the stem of this genus was a great caudex made up of the bases of two rows of huge leaves cemented together probably by intervening cellular tissue. As in the Devonian and in the modern times, the stems of the tree-ferns of the Carboniferous strengthened themselves by immense bundles of cord-like aerial roots, which look like enormous fossil brooms, and are known under the name *Psaronius*.

We have only time to glance at the vast brakes of tall *Calamites* which fringe the *Sigillaria* woods, and stretch far seaward over tidal flats. They were allied to modern *Mares-tails* or *Equisetums*, but were of gigantic size, and much more woody structure of stem.

The *Calamites* grew on wet mud and sand-flats, and also in swamps; and they appear to have been

especially adapted to take root in and clothe and mat together soft sludgy material recently deposited or in process of deposition. When the seed or spore of a *Calamite* had taken root (and it is not unlikely that, like the very remarkable spores of the *Equiseta*, their seeds had wings which expanded to waft them through the air when dry, and closed instantly when they touched the damp soil), it probably produced a little low whorl of leaves surrounding one small joint, from which another and another, widening in size, arose, producing a cylindrical stem, tapering to a point at the base. To strengthen the unstable base, the lower joints, especially if the mud had been accumulating around the plant, shot out long roots instead of leaves, while secondary stems grew out of the sides at the surface of the soil, and in time there was a stool of *Calamites*, with tufts of long roots stretching downwards, like an immense brush, into the mud. When *Calamites* thus grew on inundated flats, they would, by causing the water to stagnate, promote the elevation of the surface by new deposits, so that their stems gradually became buried; but this only favoured their growth, for they continually pushed out new stems, while the old buried ones shot out bunches of roots instead of regular whorls of leaves.

The *Calamites* growing in vast fields along the margins of the *Sigillaria* forests, must have greatly protected these from the effects of inundations, and by collecting the mud brought down by streams in times of flood, must have done much to prevent the intrusion of earthy deposits among the vegetable matter. Their chief office, therefore, as coal-producers seems to have been to form for the *Sigillaria* forests those reedy fringes which, when inundations took place, would exclude mud, and prevent that mixture of earthy matter with the coal which would have rendered it too impure for use.

Rarely in the swampy flats, perhaps more frequently in the uplands, grew great pines of several kinds; trees capable of doing as good service for planks and beams as many of their modern successors, but which lived before their time, and do not appear even to have aided much in the formation of coal. A botanist in the strange and monstrous woods which we have tried to describe would probably have found many curious things among the smaller herbaceous plants, and might have gathered several precursors of the modern *Exogens* and *Endogens* which have not been preserved to us as fossils, or are known only as obscure fragments. But incomplete though our picture necessarily is, and obscured by the dust of time, it may serve in some degree to render green to our eyes those truly primeval forests which treasured up for our long winter nights the palæozoic sunshine, and established for us those storehouses of heat-giving material which work our engines and propel our ships and carriages. Truly they lived not in vain, both as realising for us a type of vegetation which otherwise we could not have imagined, and as preparing the most important of all the substrata of our modern arts and manufactures. In this last regard even the vegetable waste of the old coal swamps was most precious to us, as the means of producing the clay iron ores of the coal measures. I may close this notice of the carboniferous forests and their relations to man with a suggestive extract from a paper by Professor Huxley in the "Contemporary Review":—

"Nature is never in a hurry, and seems to have

had always before her eyes the adage, 'Keep a thing long enough and you will find a use for it.' She has kept her beds of coal for millions of years without being able to find much use for them; she has sent them down beneath the sea, and the sea-beasts could make nothing of them; she has raised them up into dry land and laid the black veins bare, and still for ages and ages there was no living thing on the face of the earth that could see any sort of value in them; and it was only the other day, so to speak, that she turned a new creature out of her workshop, who by degrees acquired sufficient wits to make a fire, and then to discover that the black rock would burn.

"I suppose that nineteen hundred years ago, when Julius Cæsar was good enough to deal with Britain as we have dealt with New Zealand, the primeval Briton, blue with cold and woad, may have known that the strange black stone, of which he found lumps here and there in his wanderings, would burn, and so help to warm his body and cook his food. Saxon, Dane, and Norman swarmed into the land. The English people grew into a powerful nation, and Nature still waited for a return for the capital she had invested in the ancient club-mosses. The eighteenth century arrived, and with it James Watt. The brain of that man was the spore out of which was developed the steam-engine, and all the prodigious trees and branches of modern industry which have grown out of this. But coal is as much an essential condition of this growth and development as carbonic acid is for that of a club-moss. Wanting the coal we could not have smelted the iron needed to make our engines, nor have worked our engines when we had got them. But take away the engines, and the great towns of Yorkshire and Lancashire vanish like a dream. Manufactures give place to agriculture and pasture, and not ten men can live where now ten thousand are amply supported.

"Thus all this abundant wealth of money and of vivid life is Nature's investment in club-mosses and the like so long ago. But what becomes of the coal which is burnt in yielding this interest? Heat comes out of it, light comes out of it, and if we could gather together all that goes up the chimney and all that remains in the grate of a thoroughly-burnt coal fire, we should find ourselves in possession of a quantity of carbonic acid, water, and ammonia, and mineral matters exactly equal in weight to the coal. But these are the very matters with which Nature supplied the club-moss which made the coal. She is paid back principal and interest at the same time; and she straightway invests the carbonic acid, the water, and the ammonia in new forms of life, feeding with them the plants that now live. Thrifty Nature! surely no prodigal, but most notable of housekeepers!"

All this is true and admirably put. Its one weak point is the pedantic personification of Nature as an efficient planner of the whole. Such an imaginary goddess is a mere superstition, unknown alike to science and theology. Surely it is more rational to hold that the mind which can utilise the coal and understand the manner of its formation, is itself made in the image and likeness of the Supreme Creative Spirit, in whom we live and move and have our being, who knows the end from the beginning, whose power is the origin of natural forces, whose wisdom is the source of laws and correlations of laws, and whose great plan is apparent alike in the order of nature of the Palæozoic world and of the modern world, as well as in the relation of these to each other.

We must reserve to another article our notices of the animal life of the Carboniferous formation, and also some further notes about the materials of coal.

GHOSTS AND GHOST LORE.

II.

"HAUNTED houses," as they are called, figure largely in the literature and history of Ghosts. We have collected some curious instances, some of which can be proved to be "haunted" in very simple and unromantic ways, while others retain a certain amount of mystery. Of this kind is a story told in the recently published *Life of Mr. Barham*, author of the "Ingoldsby Legends."

The last entry in Mr. Barham's note-book for 1836 contains some extraordinary particulars relating to a "haunted house" in Hampshire. They were furnished by Mrs. Hughes, who heard them originally from Mrs. Gwynne, an eye, or rather ear-witness of the strange occurrences narrated. This lady's account was subsequently confirmed by many others (the late Duchess of Buckingham, a resident in the neighbourhood, among the rest), all of whom were perfectly familiar with the details, and, I believe, impressed with their truth, many having had opportunities of examining the "attested Diary" referred to. It is right to premise that certain slight alterations have been made by Mr. Barham in this narrative since Mrs. Hughes communicated it to him.*

It is evident, he says, that she must have confounded Mr. Ricketts, who was a bencher of Gray's Inn, and had large estates in the Island of Jamaica, with his son, Captain William Ricketts, who took his uncle's name, Jervis, in 1801, and was the father of the present Viscount. Mary Jervis married Mr. Ricketts in 1757, and lived to the age of ninety, dying in 1828. A *ms. pedigree* seems to justify these amendments, which, however, in no respect affect the authenticity of the incidents themselves.

MRS. RICKETTS'S GHOST STORY.

It was about the period when Captain Jervis, afterwards Earl St. Vincent, commanded the "Thunderer" (Foudroyant?) in which he so much distinguished himself, that, on the return of that gallant commander to England, he found his sister, Mrs. Ricketts, the wife of Mr. Ricketts, of Jamaica, a bencher of Gray's Inn, residing in a house between Alston and Alsford in Hampshire, about four or five miles from Abingdon, the seat of the Buckingham family. This house, then called "New House," was part of the property of the noble family of Legge, and of that particular branch of it of which the Lord Stawell (a peerage now extinct) had been the head. It had been principally occupied during his life by a Mr. Legge, a scion of the family, notorious for his debauched and profligate habits, and after his decease had remained for some time unoccupied, gradually acquiring, as is the case with most unoccupied mansions of a similar description, the reputation of being the resort of supernatural visitants.

To this circumstance, perhaps, and the consequent difficulty of finding a tenant, may be attributed the easy terms on which Mr. Ricketts obtained it as a residence for his wife and family, during his own

* The "Life and Letters of the Rev. Richard Harris Barham." By his Son. 2 vols. E. Bentley. 1870.

absence on a visit to his estates in the West Indies. This gentleman seems to have held the stories connected with the building in thorough contempt, a sentiment partaken of by Mrs. Ricketts herself, who was naturally a strong-minded woman, and whose good sense had acquired additional strength from the advantages of an excellent education.

To "New House" then the lady had repaired almost immediately after her husband's departure for Jamaica, purposing in quiet retirement to superintend there the education of her daughter (afterwards married to the Earl of Northesk).

Mrs. Ricketts had not been long located in her new domicile before the servants began to complain of certain unaccountable noises which were heard in the house by day as well as by night, and the origin of which they found it impossible to detect. The story of the house being haunted was revived with additional vigour, especially when its mistress became herself an ear-witness of those remarkable sounds, and an investigation set on foot and carried on under her own immediate superintendence, assisted by several friends whom she called in upon the occasion, had proved as ineffectual as those previously instituted by the domestics. The noises continued, as did the alarm of the servants, which increased to an absolute panic, and the whole of them at length, except one old and attached attendant on Mrs. Ricketts's person, gave warning and left their situations in a body.

A thorough change in the household, however, produced no other effect than that of proving beyond a doubt that the noises, from whatever cause they might proceed, were at least not produced by the instrumentality or collusion of the domestics. A second and third set were tried, but with no better result; few could be prevailed upon to stay beyond the month.

It was at this time that Mrs. Gwynne, from whose mouth Mrs. Hughes had this relation, came to reside a short time with her old and dear friend, and being a woman of strong nerve she remained with her longer than she had originally intended, although not a day or night passed without their being disturbed. Mrs. Gwynne described the sounds as most frequently resembling the ripping and rending of boards, apparently those of the floor above, or below (as the case might be) that in which her friend and herself were sitting; but on one occasion she herself distinctly heard the whisperings of three voices, seemingly so close to her that, by putting out her hand, she fancied she could have touched the persons uttering them. One of the voices was clearly that of a female, who appeared to be earnestly imploring some one with tears and sobbings; a manly, resolute voice was evidently refusing her entreaty, while rough, harsh, and most discordant tones, as of some hardened ruffian, were occasionally heard interfering; these last were succeeded by two loud and piercing shrieks from the female; then followed the crashing of boards again, and all was quiet for the time.

The visitations were so frequently repeated that, at length, even Mrs. Gwynne's constancy began to give way, and she prepared to leave her friend. Previously to her departure, however, she was aroused one night by Mrs. Ricketts's cries (who slept in the next chamber to her), and on running to her assistance, was informed that, just before, she, Mrs. Ricketts, had distinctly heard some person jump from the window-sill down on the floor at the foot of the bed, and that, as the chamber door had continued

bolted, he must still be in the room. The strictest search was made, but no one was discovered.

Various were the causes assigned in the neighbourhood by the peasantry for these supernatural visitations, the history of which had now become rife all over that country side. Among other things it was said that Mr. Legge had always been a notorious evil liver, that he had held in his employ one Robin, as butler, a man with a remarkably deep-toned, hoarse, guttural voice, who was well known as a pander to all his master's vices and worst passions, and the unprincipled executor of all his oppressive dealings with his tenantry. That there was also a niece of Mr. Legge's resident with her uncle, and that dark rumours had been afloat about her, and of her mysterious disappearance. Heavy suspicions, indeed, had been entertained on that score by the village gossips, which had gone so far that nothing but the wealth and influence of the squire had stifled inquiry. What had eventually become of the young lady no one knew, but it was supposed she had gone abroad before her uncle's death.

Mrs. Ricketts and her friends endeavoured to follow up these rumours, but the only thing they could arrive at with any degree of certainty was what they learned from an aged man, a carpenter, who declared that many years ago he had been sent for to the Hall, and had been taken by Robin up into one of the bedrooms, where, by his direction, he had cut out a portion of one of the planks, and also a part of the joist below; upon which the butler had brought a box, which he said contained valuable title-deeds that his master wished to have placed in security, and having put it into the cavity ordered him to nail down the plank as before. This, he said, he had done, and could easily point out the place.

Mrs. Ricketts ordered the man to be conducted upstairs, when he at once fixed on the door of her own sleeping apartment, saying, that, though it was a good many years ago, he was certain that was the room. On being introduced, he looked about for an instant, and then pointed out a part of the floor where there was evidently a separation in the plank, and which Mrs. Ricketts declared was the precise spot, as near as she could have described it, where the supposed intruder had alighted on his jump from the window. The board was taken up; the joist below was found to be half sawn through, and the upper portion removed, precisely as the carpenter had described it; the cavity, however, was empty, and the box, if box there had been, must have been removed at some previous opportunity. After this investigation, which ended in nothing, the noises and the whisperings, though never distinct, continued with but little diminution in frequency, and proved sufficient to render the house exceedingly uncomfortable to its inmates.

Matters were in this state when Captain Jervis, on his return to England, made his appearance at New House, with his friend Colonel Luttrell, to pay a visit to his sister. He had already heard of her annoyance, by letter, and of her disinclination to take the step he recommended, of removing, from the fear of offending her husband, who was somewhat of a martinet at home, and would of course treat the whole story as a fable. Captain Jervis seemed himself very much inclined to look upon it at first in the same light, or rather to consider it as a trick—for he had no doubt of his sister's veracity—and a trick which he was determined to find out.

With this view, the Colonel and himself, sending all the rest of the family to bed, sat up, each in a separate parlour on the ground-floor, with loaded pistols by their side, and all other appurtenances most approved, when people have the prospect before them of a long night to be spent in ghost-hunting.

The clock had stricken "one," when the sounds already mentioned, as of persons ripping up the floor above, were simultaneously heard by both. Each rushed from the parlour he occupied, with a light in one hand and a cocked pistol in the other, and encountered his friend in the passage. At first a slight altercation ensued between them, each accusing the other of a foolish attempt at a hoax; but the colloquy was brought to an abrupt termination by the same sounds which each had heard separately being now renewed, and, to all outward seeming, immediately above their heads. The whispering, too, at this juncture became audible to both.

The gentlemen rushed up-stairs, aroused their servants, and commenced a vigorous and immediate search throughout the whole premises; nothing, however, was found more than on any former occasion of the same kind, with this exception, that in one of the rooms sounds were distinctly heard of a different character from any before noticed, and resembling, as Mrs. Gwynne averred, "the noise which would be produced by the rattling dry bones in a box." They seemed to proceed from one of two presses which filled up a portion of the apartment; the door was immediately burst open, and the piece of furniture knocked to pieces; every search was made around, and even in the wall to which it had adjoined; but still, as heretofore, all investigation was fruitless. Captain Jervis, however, at once took upon himself the responsibility of removing his sister and her family to a farm-house in the same parish, where they remained till Mr. Ricketts's return.

That part of the county of Hants being much the resort of smugglers, an attempt has been made to account for these events by attributing them to their agency, aided by the collusion of the servants. The latter part of the supposition could not be true,—the whole household having been so frequently changed. Even Mrs. Ricketts's favourite maid had at last, most reluctantly, abandoned her; besides which Mrs. R. had, throughout the whole business, kept a diary of the transaction, which she had regularly caused all the domestics, as they left her service, to sign, in attestation of its truth, as far as their own personal experience had qualified them so to do. Mrs. Gwynne herself, as well as a few other visitors, had done the same, and this diary coming into the hands of her daughter at her mother's decease has been in the same way transmitted to the grand-daughter, in whose possession it now is.

It remains to be added, that with Lord St. Vincent the subject was a very sore one to the day of his death; and any allusion to it always brought on a fit of ill-humour, and a rebuke to him who ventured to make it. The house has been since, I believe, pulled down, but it does not appear that anything has occurred to throw any light on the mystery, or to strengthen or refute the suspicions which the good folks in the neighbourhood entertained of the crime of Mr. Legge, and the unrest which his spirit, and those of his supposed coadjutor and victim, had experienced from the date of his delinquency.

Mrs. Hughes expressed her doubt as to the accuracy of the name of the mansion in which all these

strange occurrences took place, but of the fact she was positive. The way in which she first became acquainted with them was as follows:—Mrs. Gwynne being a visitor at her mother's house, was about to relate the story when she was checked by the hostess, who requested her to wait till Mary Anne (Mrs. Hughes), at that time a child, was gone to bed. This so excited the girl's curiosity that she contrived to hide herself behind the curtains of the room till the "ghost story" was told.

According to another version which was given by an elderly lady named Hoy, to Lady Douglas, from whom I heard it, the scene of these strange events was Marwell Hall, a lonely mansion situated between Bishopstoke and Winchester. The house had been the residence of Jane Seymour, and preparations for her marriage with Henry are said to have been going on within its walls during the very day appointed for the execution of the hapless Anne Boleyn. Miss Hoy maintained that it was no other than the ghost of the unfeeling Queen Jane who used to disturb the inmates, and whose uncomfortable habits led eventually to the destruction of her former abode. For the old lady went on to say that Captain Jervis, having watched in the haunted room alone one night, during which he was heard to fire a couple of pistol shots, appeared next morning with a grave and troubled countenance; that he positively refused to answer any questions as to what had taken place, but at once sought an interview with the landlord, and in consequence of the communication made to him, but withheld from all others, the house was shortly after demolished, and a modern habitation erected in its place. It is obvious that these two versions may be partially reconciled on the very probable supposition that it is the present building which is known as the "New House," and that it has been confounded by Mrs. Hughes with the original Marwell Hall. Of course considerable difference of opinion must continue to exist respecting the identity of the ghost, unless, indeed, it should be allowed that the two, like rival tragedians engaged at the same theatre, used to perform on alternate nights.

ROOKSTONE.

CHAPTER XLVIII.—JANET'S NOTE.

WHAT had come to Richard? Mary had been asking herself this vainly of late, and still she could find no answer to her question.

Kitty's words on that memorable evening in the grassed road had awakened a confused and misty uneasiness, but till Mary put her doubt in words and saw how strangely her husband was affected by it, it had not gained any strength; probably, had she never spoken it to him, it would have withered out of existence. But ever since she had spoken she had been aware of a strange change in her husband's manner towards her—a change which seemed to have a deeper cause than her words, for it was not directed to her only. Richard seemed tormented by some inward anxiety which kept him ever restless, ever watchful over the movements of those among whom he lived. He rarely left his wife, but he took no pleasure in her companionship; he sat silent for hours, and if he did leave her he always reappeared suddenly, as if he wanted to take her by surprise. Was he fretting for the loss of his child? Mary asked herself;

but in other ways he gave no sign of this. She noticed, too, how he watched the movements of the servants. Once she found him at her writing-desk diligently examining its contents, and she would have paid no heed to this but for her husband's sudden start of alarm, as if he had been caught in the commission of some crime.

She longed to ask what ailed him, but ever since the birth of her child Mary had learned to fear her husband. He was rarely angry with her, but she knew what his anger could be, and she shrank from rousing it. Besides, since her last appeal about Janet, there had been a reserve between them which seemed to poor Mary impassable.

One morning he told her his intention of taking her to France; she remonstrated, but he took no notice. Then for the first time since her marriage Mary felt rebellious.

"I cannot go, Richard; it would break my heart to leave baby's grave."

Even then he turned coldly away.

"You do not know what is good for you," he said, gloomily; "you are fretting yourself to death here, change is absolutely necessary for you."

She protested, but he was deaf, and she left the home of her childhood, and of her married life also, weeping passionate tears—tears whose bitterness lay in the distrust her husband felt towards her.

As yet the doubt Kitty's words had wakened had not weakened Mary's love. Women love on even when all semblance of good is stripped from the idol they worship; and doubtless this fond clinging love has done as much in winning souls from sin as the more severe virtue which can only love what is unstained.

Mary believed her husband was really still the same, obscured for the present by some dreadful anxiety, which she, alas! was too weak and incapable to share; but she had no patience to wait for this to clear away. She longed to question him openly; but he had once threatened to leave her, and something told her that Richard was not a man to threaten twice.

She knew they must make some stay in London, and she resolved to see Janet; but she felt that this meeting must be effected without her husband's knowledge. He left her alone so seldom now. There was only one way. Richard always breakfasted in his dressing-room, never coming down-stairs till ten o'clock. It seemed to Mary that in a strange hotel it would be quite possible for her to see Janet quietly before her husband appeared. Janet was so wise, she would tell her what to do. She said this as a reason for disobeying her husband's orders; but Mary was longing for her sister's love—longing to pour out this overwhelming sorrow to one who would really comfort her. She had set aside and neglected the safe ways in which she had been reared; now in sorrow she longed to return to them, not so much from repentance as from expectation of the comfort they would bring.

"Janet has always been so good and religious," she said; "the very look of her will give me help."

And then, as we know, she had watched her opportunity, and beckoning Leroux to the railway carriage, had given him the message for her sister.

She was sitting now with Janet's reply in her hand. Richard had only just left her to smoke a cigar, and although Leroux had returned some time ago, he had not before found an opportunity to deliver Janet's note to his mistress.

Mary's perceptions of right and wrong doing had become blunted during the past year, but a quick flush rose on her cheek as the man gave her the note. Richard might be harsh to her, but was not this a deliberate act of deceit? But a blunted conscience or a stifled one is soon hushed. It was for a good purpose that she wanted to see Janet; both her husband and herself would be happier for the advice and guidance she should get from her sister.

She read the note again. Richard would be soon back. Janet said she hoped to be in Cavendish Square next morning punctually at eight o'clock; there was nothing else to be gleaned from the note except a few loving words; but just now Mary hungered for love, and she read these over and over again.

She was very, very weary. Yesterday had been a day of passionate sorrow and anger; she had passed a sleepless night, and then had come the fatigue of the journey and the wretch of leaving her baby's grave. She sat with her fair head resting on her hand, the soft waxen light falling on her lovely face, while she read Janet's letter; and as she read the lines seemed to cross one over another, her head became heavier and heavier—she was fast asleep.

The door opened gently, and Richard came in. For a moment he stood looking at his sleeping wife, and if Mary had then opened her eyes and met his look of wistful tenderness, much sorrow might have been spared her. But she did not wake; she could not hear his tread on the rich soft carpet as he advanced towards her, and as he advanced saw the open letter in the hand which had sunk on her lap. His face darkened instantly. A letter! How was it possible she had received one when their journey had been planned and executed with such speed? But he did not hesitate; he drew the note from between her fingers and read it. Surprise, utter, unbounded astonishment that his docile plaything of a wife was capable of conspiring against him, had an equal share with the anger that rose against her. He had been thunderstruck when at Rookstone she had avowed her knowledge of her sister's visit; but then he knew that she was aware also that he had sent Janet away again. Fear of his displeasure might have produced concealment. This was quite different. Something in the tender words, coming from so cold a person as he considered Janet to be, assured him that Mary had complained to her sister—had appealed to her for love and protection, and an uneasy consciousness of his late coldness and neglect made itself felt. But Mary had brought that on herself by daring to question him, and as the remembrance of her words came back his face grew darker still. How did he know the number of secret letters that had been passing, or how Mary had been watching him during these last few days. He had suspected her at Rookstone, but he had almost smiled at his own suspicions; now they took definite shape. His suspicions only rested on Mary, he never thought of Leroux. He knew what he dreaded, and he knew also that to avert the fulfilment of that dread, Mary and Janet must never meet again—never, that is to say, till change of scene had obliterated certain memories from the mind of his wife.

While he stood there thinking, his face had hardened into the expression of a set purpose. He looked at his wife. She started, and a sob escaped her, but she did not waken. Bending over her gently, he replaced the letter as he had found it, and left the room as noiselessly as he had entered it.

CHAPTER XLIX.—DISAPPOINTMENT.

THE summer-like spring had been delusive—a mirage of the season which we know is too far off to be real yet; but it had lasted long enough to deceive poor credulous vegetation, and the biting wind of this morning set the green leaves shrivelling, in the vain hope that by curling up their edges they could protect themselves from the fierce enemy; not they, the wind only laughed at their efforts, and scorched all verdure out of them.

Janet shivered as she stepped out of a cab—at the hotel to which Leroux had directed her. She heard the clocks striking eight as she passed into the entrance hall.

Presently a servant appeared.

"Can I see Mrs. Wolferston?"

"I'll see, ma'am," and the waiter, who looked as if he were only just awake, disappeared again.

"Mrs. Wolferston is not here, ma'am, left quite early this morning," he said, on returning.

"This morning!" Janet felt so stunned that she did not know what to say next.

"Yes, ma'am, for the continent, I believe."

"Do you know if they left any letter or message?"

"I'll inquire, ma'am, if you will wait one moment," and he showed her into a small waiting-room.

Gone! what could this mean? and then it flashed upon Janet that Richard had discovered her intended visit, and had taken this means of preventing a meeting between her and her sister. But why should he be at such pains to keep them apart? and, as she remembered Mary's blind devotion to her husband, it seemed to her that matters must be greatly changed between them before her sister would send for her against his wishes; for Janet had quite comprehended that the intended meeting of this morning was to have been kept from Richard's knowledge. It seemed to her that some mystery lay under this sudden flight. She tried to think over all that Leroux had said yesterday.

The waiter came back.

"There is no note or message left, ma'am. Mr. and Mrs. Wolferston and their man-servant—the lady brought no maid with her—left here this morning to catch the tidal train at Charing Cross. Their luggage was addressed 'Paris.'"

There was no use in staying any longer. The cab was waiting, and Janet went back in it to Vincent Square. A deep dark fear had taken hold of her.

Had Mary reason to suspect that which she herself suspected? Had she also seen the fatal will which had stirred up so much sorrow and anxiety? It seemed to Janet this must be so, and that her sister's anxiety to see her arose from this knowledge, and from her terror at finding herself in possession of such a secret. But, then, if Mary loved Richard, would she wish to betray him? This was a question Janet dared not answer. How strangely her mother's early prejudice against Mary's marriage was vindicating itself, and how bitterly her own interference on Richard's behalf was brought home to her! She prayed earnestly for her unhappy sister—prayed, too, that she herself might never be exposed to such a trial of love and truth. She reached Vincent Square before her cousins had left their bedrooms, and in the excitement and bustle of Louisa's departure her morning expedition seemingly escaped the notice of even Mrs. Webb.

Louisa had just driven off, accompanied by her father, and Janet went to her own room. She wanted to think over what had happened, and to plan some means of communicating with her sister. Mr. Painson would soon find out some trace of Mary's destination, but she could not apply to Mr. Painson. She must trust the matter to Henry; and dearly as she loved him, Janet knew that the very qualities she prized in her lover—his outspoken frankness, his manly sincerity and horror of mystery or subterfuge, would unfit him for the task.

While she sat thinking, a letter was brought to her. The address was almost illegible, but it was written by Mary. Janet's heart gave a great bound. The excitement of the last few days was unnerving her, although it strung her up into a temporary feverish excitement. There were only these few words:—

"Follow me quickly. You will soon overtake us. Remember you promised to come whenever I asked you. I shall die if you do not come.—MARY, Hotel des Princes, Rue de Richelieu. This is where we went before, so I expect we shall go there now."

Blotted, smeared with traces of hot tears, it was plain to Janet that her sister had been taken away by surprise, and against her will, and her indignation rose against Richard. She wrote to Henry at once at his office, begging him to come to her as soon as he could. She would explain the reason of her hasty summons when she saw him. She went out and posted the note herself, glad of any movement or exertion. She was far too highly wrought to sit quietly, letting events take their natural course; and even with all the tasks she set herself to accomplish, the hours passed slowly and heavily till the time when she might reasonably expect her lover. He might have come sooner, she knew that, but then he might have been detained; but when an hour had gone by from the time of his expected arrival, she grew very anxious.

It was not yet four o'clock. Leaving word with the servant that if Captain Wenlock called he was to be asked to await her return, she went herself to his lodgings. In answer to her inquiry, she learned that he had that morning received a telegram, and had gone away immediately.

"Did he leave any message?"

"No, nothing; only I knows he won't be back by Sunday."

The stolid, stupefied-looking servant, who worked incessantly from morning till night, and then got about six hours' sleep in an underground kitchen, "had not seen Captain Wenlock when he went away." If she had taken the trouble to inquire, she would have found that her mistress had a note for Miss Wolferston, a note in which Henry told her that the telegram summoned him to Lord Fletcher without a moment's delay.

Later in the evening, when the mistress was going out, she gave this note in charge to the servant to deliver if any one should come from Miss Wolferston. In his hurry Henry Wenlock had given no directions about posting it, and in fear of a reprimand for her previous neglect of inquiry, the maid settled her conscience by putting the note on the fire.

Janet felt puzzled and uncertain; it seemed to be a clear duty to follow Mary. Henry could not help her, Mr. Painson should not, and yet she could not go to Paris by herself; she might take Thomson, but then Thompson would probably not be able to leave her

business at a moment's notice; and it was plain to Janet that if she wished to trace her sister easily, she must not delay.

As she walked home debating this question with herself, a new thought occurred to her. Aunt Dawson—she was always good-natured and willing to serve any one. This certainly was not an ordinary request, but still she could make it.

She had just passed a cab-stand; she hurried back to it, and desired to be driven to Harley Street.

It seemed to Janet as if the first steps were accomplished when she heard that Mrs. Dawson was at home.

"Very glad to see you, I'm sure, my dear; if I hadn't had callers, I was going to drive round and ask you to spend a few of these last single days with me; eh, what do you say now?"

Janet smiled. She felt less excited now.

"I should like it very much, thank you; but I have a summons to join Mary, and she is in Paris, and I don't like to travel alone—it would not be quite nice, would it?"

"Nice! Dear me, no; nice—I should say exceedingly nasty! Why, when I was a girl, Janet, I should not have thought of going about in a cab alone; and as to travelling, in that girls have altered more than any other thing since I was young; it seems to me they do everything that a man can do, and yet they give themselves up far more to dress and vanities than they used to do; and as to the way they display their ankles—well, I can only hope the rising generation have well-shaped feet!"

Janet's impatience grew uncontrollable.

"But, aunt, I must really go to Mary; she has lost her baby; she is, I fear, ill and unhappy. Will you go with me?"

Travelling was very pleasant to Mrs. Dawson, but then her travelling was always planned and executed with considerable forethought. The planning and re-planning the route; the diligent study of "Murray;" the purchase of various "travelling requisites," most of which she never used; the numerous notes of arrangement which had to pass, before all was done, between herself and the chosen friend who was to share her tour—all these little preliminaries constituted half the pleasure of the journey. She looked aghast at Janet's sudden proposal.

"Go with you, my dear; too early in the year, isn't it?—the equinox is hardly safely over, you know. Paris, you say. Should you want to pay a long visit, Janet?"

"Oh, no, a couple of days would be quite sufficient. I don't like troubling you, but—but you seem the fittest person to apply to, aunt."

"Yes, yes, my dear, of course I am; and I certainly will go with you. But two days! dear child! do you think I'm a firework or a railway engine, to go here, and there, and everywhere, without a moment's rest? How soon do you want to start?"

She went through a fresh course of astonished remonstrance when Janet offered her the choice of crossing by that night's boat from Folkestone, or of waiting for the early morning train; and finally she decided on the latter plan, with much self-condolence for the extraordinary effort she was making.

"But I was helpless," she said to herself when Janet had departed—"every bit as helpless as a screw in a hole that fits it; she drove me into it whether I liked it or not, and whether I do like it now I haven't the slightest idea."

Varieties.

ROBERT CHAMBERS.—The death of Robert Chambers deserves some notice, for however differently different men may estimate his work in its influence upon the moral and intellectual life of the long period over which it has extended, all will frankly admit that he was a most vigorous and conscientious worker. To Robert Chambers is undoubtedly due the merit of having been, not merely the pioneer, but, in conjunction with his brother William, the most successful promoter of cheap literature of a highly intellectual character. Commencing life as a dealer in old books, he subsequently joined his brother William as a bookseller and printer, by-and-by becoming a book-maker. His "Traditions of Edinburgh" was the first book which brought him prominently into notice, and this was followed in rapid succession by "Popular Rhymes of Scotland," "Pictures of Scotland," "Histories of the Scottish Rebellion," three volumes of "Scotch Ballads and Songs," and "Biographies of Eminent Scotchmen." "The Life and Works of Robert Burns," "The Domestic Annals of Scotland," and "The Book of Days," are his more recent works. These are the chief of his acknowledged writings, and it is on those that his literary reputation must stand or fall. Without entering into anything like a criticism of the work of the deceased, or that of the firm of which he was a member, it is not out of place or time to record the opinion here that the aim of the Chamberses has been more the informing and sharpening of the intellect than the sanctification and the development of the loftier and more spiritual side of our common nature. Their work, however valuable within certain limits, is not the highest kind of work, because it was conceived and carried out in that rationalistic spirit which recognises man's temporal and material interests as those with which man has chiefly to do.—*Weekly Review*.

THE QUEKETT MICROSCOPICAL CLUB.—To-day we are the guests of the Quekett Microscopical Club, upon one of its Saturday afternoon field-excursions. Who has not heard of "The Quekett"? Among the rising Londoners of to-day who give themselves to microscopic recreation and study, the Quekett is a great institution. The work it is doing among young men in London who have evening and Saturday afternoon leisure has got for it a name. The Quekett is the republic of London microscopists and naturalists. It is the popular, teaching, and working microscopic club of this metropolis. About eight hundred members strong, it is rapidly popularising natural history as a field pursuit in the summer months, and making the microscope a fireside companion in the winter in many a home. With the North London Naturalists' Field Club, and the Old Change Microscopical Society, the Quekett is fast removing the reproach which London has suffered from the naturalists of the north. A Manchester visitor to our collecting-grounds to-day may find plenty of kindred enthusiasts for Nature on the Saturday afternoon. Not to know of the Quekett and its work is to have a limited acquaintance with the Londoners of the rising generation, and of the place the microscope is taking in the pleasures and studies of the period.—*From "Rambles round London: Rural and Geological," by Henry Walker.*

WILL THE EARTH BECOME A SUN SPOT?—Mr. R. Holmes sends a paper intended to prove that the earth is gradually solidifying, and losing its aqueous vapour; also that it is steadily diminishing its distance from the sun, as shown by the gradual shortening of the year or annual revolution of the earth; also maintaining that the "solar spots" are not excavations, nor breaks in the solar atmosphere, but that they are matter such as forms the planets in a state of combustion, whose emissions supply the solar system with heat, light, and electricity. The planetary, cometary, and nebular systems are considered in relation to this view. We receive occasional communications of this kind, which we are unable to publish because they deal more with what must yet be questions of theory and speculation rather than ascertained facts of science.

WONDERFUL INSTINCTS.—A naturalist, in his recently published travels in Japan, notes that the nut-hatch, when it substitutes for its usual soft food the hard hazel-nut, places this novel pabulum in its water-glass, "evidently with a notion that it would in time become softer." He also tells us that even the dull seal has its instincts: "In Aniwa Bay, Saghalien, is a rocky and lonely spot; here come the old and sick of the seal tribes to seek refuge from their fellows, and to breathe their last in peace."